

REMARKS

INTRODUCTION

In accordance with the foregoing, claims 1, 2, 12, 13, 24, 25, 35 and 36 have been amended. Claim 47 has been cancelled. Claims 1-46 are pending and under consideration.

CLAIM REJECTIONS – 112

Claims 1-47 were rejected under 35 USC 112, second paragraph, as being indefinite. Appropriate correction has been made to claims 1, 2, 12, 13, 24, 25, 25 and 36. Claim 47 has been cancelled. Specifically, the phrase "said hand from the first process" has been amended to recite "said hand holding and taking out a container." The phrase "conveying... at a predetermined position" has been replaced with "conveying... to a predetermined position." The phrase "the container held by the first robot" has been amended to recite "the container held by said hand of said first robot."

Withdrawal of the foregoing rejection is requested.

CLAIM REJECTIONS – 102

Claims 1-47 were rejected under 35 USC 102(b) as being anticipated by Nelson et al. (US 6,723,174) (hereinafter "Nelson").

Nelson discloses an automated semiconductor processing system. In one embodiment of Nelson, an engager plate 910 is positioned on an engager actuator 912 that moves the engager plate 910 longitudinally, i.e., in a direction from the front wall 806 to the back wall 810, and perpendicular to those walls. Nelson, 17:14-17:18 and Figure 34.

Further in Nelson, a docking wall 914 at the docking station 828 and a deck 932 separate the indexer space 820 from the process space 822. The docking wall 914 has openings 916 and 918 aligned with the pod positions T and U. Hence, a pod door 816 of a pod 815 on an engager plate 910 lifted to a pod position T or U by a docking elevator 900, aligns laterally and vertically (but initially not longitudinally) with an opening 916 or 918 in the docking wall 914. After the pod 815 is vertically aligned with an opening 914 or 916, the engager actuator 912 moves the pod forward, so that the front face of the pod contacts the docking wall 914. During other movement of the pod 815 on the elevator 900, the engager actuator 912 is retracted, so that the pod is

spaced apart from the docking wall 914 and can be moved vertically without interference with the docking wall 914, or other components. Nelson, 17:19-17:34 and Figure 34.

Claims 1-11

Amended independent claim 1 recites: "...a first robot having an articulated arm and a hand at a distal end of the arm, said hand holding and taking out a container containing objects positioned therein -from the first process and conveying and positioning the held container using said arm to a predetermined position..." In contrast to claim 1, Nelson does not discuss a robot having an articulated arm. The Office Action relies on the engager actuator 912 of Nelson to supply this feature of the claim 1. The engager actuator 912 of Nelson moves an engager plate 910 longitudinally. That is, the engager actuator 912 only can move in a direction from the front wall 806 to the back wall 810, in a line perpendicular to those walls. By contrast, claim 1 recites an articulated arm.

Claim terms carry their ordinary meaning unless it appears that the inventor used them differently. In the present application, the term "articulated arm" is given its ordinary meaning which is an arm united by a joint or joints. Figures 1, 2 and 5 show the articulated arm of the present application.

In the "Response to Applicant's Arguments" section of the Office Action, the Examiner acknowledged the difference between the articulated arm of the present invention as discussed in the specification and the elevator/engager actuator of Nelson, but held that the limitations of the specification could not be read into the claims. It is respectfully submitted that "articulated arm" is in claim 1 and patentably distinguishes over the engager actuator 912 since the articulated arm is jointed in contrast to the engager actuator 912 which is only capable of moving the pod 815 in one direction from a back wall to a front wall. Figure 34 of Nelson, showing engager actuator 912, clearly does not show articulation.

Amended claim 2 recites: "...a first robot having an articulated arm and a hand at a distal end of the arm, said hand holding and taking out a container containing objects from the first process and conveying and positioning the held container using said arm to a predetermined position..." In contrast to claim 2, Nelson does not discuss a robot having an articulated arm.

Claims 3-11 depend on claims 1 or 2 and are therefore believed to be allowable for at least the foregoing reason. Further, claims 3-11 recite features that patentably distinguish over Nelson, taken alone. For example, claim 6 recites: "...when the object is taken out from the container, a signal indicating the number of objects taken out from the container or the number of objects remaining in the container is output to outside of the system." . In Nelson, a y-axis sensor pair 696 detects the presence or absence of wafers in the cassette 88. If a wafer (corresponding to the object of claim 6) is in the cassette 88 (corresponding to the container of claim 6), the bottom edge of the wafer projects downwardly through the tunnel 725, preventing light from passing through the tunnel. The presence of any wafer in the cassette 88 will block the light from a y-axis transmitter 698, so that the y-axis detector 700 detects no light, indicating presence of at least one wafer in the cassette 88. As such, Nelson does not disclose a signal indicating the number of wafers taken out from the cassette as recited in claim 6 but rather a transmitter only capable of determining if one or more wafers is present in the cassette.

Withdrawal of the foregoing rejection is requested.

Claims 12-23

Amended claims 12 and 13 recite: "...a first robot having an articulated arm and a hand at a distal end of the arm, said hand holding and taking out a container from the second process, and carrying and positioning the held container using said arm to a predetermined position..." In contrast to claims 12 and 13, Nelson does not discuss a robot having an articulated arm.

Claims 14-23 depend on claims 12 or 13 and are therefore believed to be allowable for at least the foregoing reason.

Withdrawal of the foregoing rejection is requested.

Claims 24-34

Amended claim 24 recites: "...holding and taking out a container containing objects positioned therein from the first process, and conveying and positioning the held container to a predetermined position within an operation range of a second robot, using a first robot having an articulated arm and a hand at a distal end of the arm..."

Amended claim 25 recites: "...holding and taking out a container containing objects from the first process, and conveying and positioning the held container to a predetermined position

within an operation range of a second robot, using a first robot having an articulated arm and a hand at a distal end of the arm...”

In contrast to claims 24 and 25, Nelson does not discuss a robot having an articulated arm.

Claims 26-34 depend on claims 24 or 25 and are therefore believed to be allowable for at least the foregoing reason.

Withdrawal of the foregoing rejection is requested.

Claims 35-46

Amended claims 35 and 36 recite: “...holding and taking out a container from the second process, and conveying and positioning the held container at a predetermined position using a first robot having an articulated arm and a hand at a distal end of the arm...” In contrast to claims 35 and 36, Nelson does not discuss a robot having an articulated arm.

Claims 37-46 depend on claims 35 or 36 and are therefore believed to be allowable for at least the foregoing reason.

Withdrawal of the foregoing rejection is requested.

Claim 47

Claim 47 has been cancelled.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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